

ILLINOIS ENGINEER

ILLINOIS SOCIETY OF PROFESSIONAL ENGINEERS
INCORPORATED

Affiliated with the National Society of Professional Engineers
614 East Green Street
Champaign, Illinois



VOLUME XXXI, NO. 7

SUMMER ISSUE

JULY, 1955

VOX SECRETARII

by P. E. ROBERTS, Executive Secretary

Board of Direction

The most important item approved by the Board of Direction at its June 18th meeting was the order to present five proposals for amending the Illinois Society Constitution. The proposals which will be presented to the corporate members about July 20 are: (1) The change in the election of the Secretary-Treasurer, the I. E. C. Representative, and the National Directors from election by the Board of Direction to election by the corporate members; (2) The term of office of the Illinois Engineering Council Representatives; (3) The increase in dues of National, State and Affiliate members; (4) The change in the number of Chapter Representatives; (5) the change in the length of time a person delinquent in dues payment is carried on active rolls.

The Board of Direction made no recommendations, either pro or con, on the Constitutional Amendment proposals. The proposals, except for the last, were made necessary to carry out the wishes of the corporate members as a result of the vote on the Exploratory and Co-Exploratory Committees of last year. The fifth proposal is to make the drops for non-payment of dues at the same time as N. S. P. E., in order that there will be no confusion on reinstatements.

Joliet Chapter Meeting

The close attention to detail and the arrangements, which were as near perfect as possible, demonstrated the real interest that the E. J. & E. Railway, a subsidiary of the United States Steel Company, has in professional engineers and the profession of engineering. Not only were public relations strengthened, but the engineers came home with a new warm feeling toward the E. J. & E. Railroad.

Legislative

As the copy for this issue is being delivered to the printer, the 69th General Assembly is writing "Finis" to another session. S. B. 76, the recodification of drainage laws, was signed on July 1. The handling of this Bill was unique in that it went through both the Senate and the House and their respective committees without a dissenting vote. The three University of Illinois Appropriation Bills were signed by the Governor on June 16. The Illinois Society was of some help in obtaining restoration of part of the salary cut which had been chopped off when the bills were first introduced. S. B. 261, which

(Continued on page 2)

PRESIDENT'S MESSAGE

To the many land surveyors in the Illinois Society of Professional Engineers who are engaged in one of the oldest professions known, the following treatise is for your comfort and cheer:



PRESIDENT WALLACE

Mr. Stadia Traverse of our active sludge and meter research department has made a very thorough application of the "Analysis of Variance" of the coordinates and is reluctant to report that the description does not close. However, he does admit that the description returns to the Place of Beginning.

He is also of the opinion that a Wild Girlie and star gazing always present a problem of "propagation of errors."

The gleaming, glittering Northern star,
Often observed or espied from afar,
When seen at the zenith of elongation,
Will aid in longitudinal prolongation,
Of the exact and true determination,
Of the varying magnetic declination.

North is North and South is South,
You are oriented by word of mouth,
But we must determine North by polar observation,
And not by the prattle of local conversation.
The magnetic compass, an instrument of approximation,
Is unreliable without exacting magnetic declination.

Solar observations will determine rotation,
Spherical trigonometry will assist in location,
But you, the individual, must make the decision,
If you desire your location with exact precision.
For East is Easterly and West is Westerly,
But true North is only by Polaris manifest.

DWAIN WALLACE, President.

SUBSCRIPTION RATES

\$2.00 per year in advance to members of the Illinois Society of Professional Engineers. \$4.00 per year in advance to non-members in U.S.A. and its possessions, Canada, and Mexico. Foreign \$6.00. Single copies 40c. Published by the Illinois Society of Professional Engineers, Inc., at 614 East Green Street, Champaign, Illinois.

Address all communications to the Illinois Society, P. E. Roberts, Editor, 614 East Green Street, Champaign, Illinois.

The Illinois Society is not responsible for statements made or opinions expressed in this publication.

Entered as Second Class Matter April 27, 1949, at the Post Office, Champaign, Illinois.

will relieve the engineer from filing complete plans on a municipal improvement, has a good opportunity to become law. H. B. 384 and companion bills propose to create a department of personnel, and have moved along to the point where they can become law.

The fine cooperative effort between the engineers and the lawyers in working out the details of drainage laws recodification resulted in Senate Bill 76. The Bill is a 134-page document with an 11-page index. Since most of the controversial details had been ironed out before the Bill was introduced, the amendments requested were minor and easily agreed upon. In contrast to this, Senate Bill 638, a 12-page document, proposed to amend the Act licensing and regulating the practice of architecture. The Bill was introduced without a conference with the professional or structural engineers, and, furthermore, the Illinois Engineering Council was not consulted. A committee on cooperation with architects and a committee from the architectural society came to an understanding two years ago, and it was thought that they had agreed to clear legislation with each other. Had this clearance been made, much time could have been saved on the steering of the architects' bill through the legislature. The engineers and architects can be mutually helpful if each will recognize that cooperation is a two-way street. Professional unity can be more than a phrase, but it must be worked for.

A.S.A.E. HOLDS ANNUAL MEETING IN URBANA

by BEN F. MUIRHEID

More than 1,000 visitors were on the U. of I. campus last month to attend the 48th Annual Meeting of the American Society of Agricultural Engineers. Six hundred and ninety engineers from all of the 48 states and two foreign countries registered for the event. The four-day affair ran from June 12 to 15. Many ISPE and NSPE took an active part in arranging and conducting the meeting. E. W. Lehmann, past president of Champaign County Chapter, ISPE, was general chairman of local arrangements for the convention.

The meeting program was made up of 68 professional papers and technical committee reports dealing with the four main divisions of the profession: farm power and machinery, farm structures, rural electrification, and soil and water engineering. D. G. Carter, Champaign County ISPE member, was in charge of the meetings committee.

In addition to the technical sessions for the men, there was a complete program of activities for the 276 ladies and 127 children. While the little folk enjoyed games, crafts, hikes, and swimming under the guidance of trained leaders, the ladies were free to play bridge, visit Allerton Park, examine flower and dinnerware displays, or tour the campus.

Other activities in connection with the convention included the Society's Student Branch meetings. More than 100 delegates from student groups in the United States, Canada, the Philippines, and India participated.

Items of Personal Interest

Word has been received that W. B. (Brad) Russell, President of the Kewanee-Ross Corporation and a member of West Central Chapter, has suffered a recent heart attack.

From Aurora comes news that Rob Roy has been allowed to return to partial activity. The best wishes of the Illinois Society go to both of these good friends.

Did you hear about the engineer who went in search of Uranium with a Geiger counter? He found no uranium but he did find three men by the name of Geiger.

As the College of Engineering finished another year, a new award, the C. C. Wiley Traveling Award in Highway Engineering, was made for the first time. The committee making the selection of the winner had such a difficult time trying to name the winner between the two top men that the question was resolved by sending both men on the western tour this year. One of the winners, Dan Claire Dees, is the son of the Vice President of Ambraw Chapter, Charles L. Dees, Oblong, Illinois. The other winner, Joseph Warren Guyton, Canton, Illinois, has no Illinois Society connection so far as is known. The boys are traveling by car together going to the Pacific Northwest, Washington, Oregon, and California, and back home by way of Arizona, Texas, and Missouri. They will be back in September. The account of their trip and what they observe during the three months should make interesting reading.

Correction: Professor Babbitt's correct Brazil address is Professor H. E. Babbitt, U.S.O.M.

A.P.O. 676

c/o Postmaster

New York, New York.

The address given in the June ILLINOIS ENGINEER did not give the U.S.O.M. following the name. These letters are an important part of the address and must be used.

Frank C. Amsbary, Jr., became the president of the American Water Works Association in Chicago last month. The A.W.W.A. will celebrate its 75th anniversary in St. Louis next year with Frank at the head. Presidency of A.W.W.A. is probably the highest professional peak in the waterworks field and a post which Mr. Amsbary will fill with dignity and distinction.

It is newsworthy that Mr. Amsbary is the third member of Champaign County Chapter to be selected to the top spot in his field. In May, William "Pete" Wisely took over the helm of the American Society of Civil Engineers as Executive Secretary in New York City, and Secretary Emeritus H. E. Babbitt was sent to Rio by Uncle Sam as a teacher of teachers in Sanitary Engineering. Champaign County Chapter seems to be a stepping stone to higher ground.

The Engineer and the Civil Aeronautics Administration

by LESTER M. MARRINER

ABOUT THE AUTHOR

Lester (Les) M. Marriner was a member of the famous group who studied sanitary engineering under Professor Babbitt, and who became dubbed "The Sanitary Six." The other members of the group were Ray Plumber, "Pete" Wisely, L. C. Domke, Mudgett, and Peterson. As an undergraduate, Les had many interests, mostly athletic. He played tackle (No. 47) 1925, 1926, and 1927 on the University of Illinois football team under Zuppke. At this time six-day bicycle racing was at its height, and Les had a difficult time deciding whether to become a professional bike rider or a professional boxer. The career as a boxer was decided in an action-packed night in the old Jefferson Theatre in Peoria in the fall of 1926, if my memory is correct. Les broke some bones in his right hand in the third round of a ten-round heavyweight fight. He went on to win the fight with his left hand, but his career as a professional fighter began to fade. After graduating in 1928, he was employed by the City of Chicago and the Sanitary District. In June, 1930, he became a flying cadet in the U. S. Army, continuing until October, 1931, when he returned to employment by the City of Chicago. One day during his flying period, he had the frightening experience of having the engine drop off a single-motored ship he was flying. He landed the motorless ship without serious injury to himself.

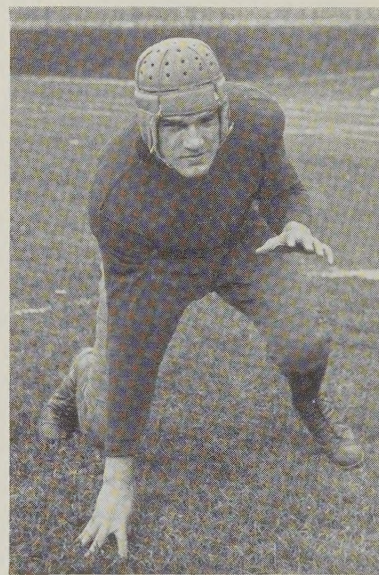
For some twenty years he filled various positions with Civil Aeronautics Administration, so he speaks with authority. He became a member of the Illinois Society in 1934, and a National Member in 1947.

EDITOR.

A lot of us may never have the exhilaration that goes with personally taking off, steering a course, and landing at our destination—the planned one, that is—but engineers are a vital part of every phase of the aeronautical industry. The pilot elan and the throaty roar of the engines—a mighty pretty sound as all will attest who have had an engine splutter in flight—this seems to be the average concept of the industry. But making all this air commerce possible are the jokers who sit over drawing tables, or are out scratching around on engineering analyses of aircraft structures, engines and appurtenances, or laying out the Federal Airways and counselling on the airports which make up the traffic arteries of the aviation structure of the U.S.A.

There are engineers from many fields working for the CAA, a number of whom have come up through the ranks to the top administrative echelons of its widespread ac-

tivities in the aeronautical, civil, electronic, and mechanical engineering facets of its aeronautical programs. In many respects, the planning which goes into the air-route and airport traffic control functions with their communications net-works is also an engineering problem, and like other facets of CAA's programs, requires close collaboration between Airways Operations personnel and engineers from the Federal Airways, Airports, Safety Regulation Division, the Experimental Station at Indianapolis, and the Air Navigation Development Board. Although this will dwell more on airways problems than the others, because of my association with that area, there is a definite tie-in of all groups in providing for the safe and expeditious movement of all aircraft, civil and military, in all types of weather.



LESTER M. MARRINER

Aircraft size and speeds have changed materially since commercial aviation became an important segment of our national economy. Paralleling this have been the remarkable advances in the electronics field. And who knows what the advent of nuclear power for aircraft or the development of rockets will mean in the period ahead? But we had better put away our much-used, albeit uncommunicative, crystal ball and review what a present-day Federal Airways engineer does to warrant being on hand for pay-day.

After many discussions in the CAA, the Bureau of the Budget and Congress, a certain amount of new facilities, relocations or improvements in airways and airport aids are specified. Each regional office, the Central Depot and the Experimental Station, having already outlined their priority requirements, then proceed with pin-pointing

expenditures for necessary facilities. As an example, we'll say the facility is a VOR radio range (Very high frequency, omni-directional). This is where the civil and the electronic engineers try to match terrain with siting criteria.

It is often a problem which involves all the professional know-how available. Leasing surveys at times call for the best salesmanship by engineers to obtain a lease for such a facility and at a reasonable rental. Where full compliance with technical criteria is questionable, the electronics group set up a test rig on the proposed site and a complete flight check is made with full analysis of recorded space pattern characteristics. Similar problems are not unusual for airport aids which facilitate transition from airways to terminal navigation facilities and control. But we'll suppose we've got all the siting and leasing problems resolved. Now comes the preparation of contract drawings and specifications, and at most airports, negotiations for space for the equipment and the men who will control and maintain the gear.

When possible the civil engineers "wear two hats," Survey or Construction, and, besides the technical know-how, ability in job-relations is important in reconciling problem areas. CAA airways engineers soon learn to wrestle with duct routing, drainage, grading, power distribution, plumbing, and temporary help-hiring problems, a detail which government regulations make somewhat involved. But we'll suppose again . . . the project engineer has satisfactorily run the gamut of these interesting and at times perplexing problems, and has approved the final payment voucher on the contract. Then, using the equipment layout and schematics prepared by the electronics engineering section, the project electronics man supervises the wiring and tune-up of the facility. Very often this facet is turned over to men in the technician category, and precise instructions are required. On the other hand, many of these technicians are old Service personnel and know their way around circuitry very well. Making the last finicky adjustments, the electronics man will request the flight inspection crew to sashay over his way and run his operating aid through the wringer.

When commissioned, the facility is turned over to the painstaking care of the maintenance engineers. They supervise the technicians who inspect the functioning aid and tune up its circuits to minimize the possibility of disrupting air commerce because it fails at a crucial moment. This no one wants to have at any time, and especially in bad weather when aircraft are stacked in all the nooks and crannies of local airspace rapidly becoming overpopulated with holding aircraft. Even here though, wise planning has provided alternate but perhaps slower procedures.

There is great opportunity for travel for CAA engineers. This includes foreign as well as domestic and there are CAA engineers in many foreign lands assisting in the development of civil aviation. Military aviation

problems haven't been neglected either . . . during World War II, CAA engineers were active as civilians behind all fronts, and in some cases not very far behind at that. One engineer was hurriedly sent to Ascension Island between South America and Africa to construct a standard low-frequency 5-tower radio range. It was quite a "novelty" to find that he was putting up the same towers and housing the same transmitters that he thought he had so firmly anchored some years previously at Evansville, Indiana. This was early in the war when radio ranges could only be obtained for the rapidly expanding military needs by relocating existing aids. Another engineer had a military escort at a forward location in North Africa during a crucial moment while he installed a smaller, loop-type, low-frequency radio range.

This is a very quick sketch of just one phase of CAA activity—its Federal Airways over which the air commerce of the nation travels. Aerodynamic, mechanical, and others all play a part in CAA's widespread activities. An engineer would be amazed at the different types of developing and testing work carried on by CAA's Technical Development Station at Indianapolis. From here come many of the devices used to speed air traffic flow. It is also possible here during a short visit to see: tests run on the ability of aircraft windshields to resist sudden impact of a large bird in flight (using fowl carcasses fired at mockups of aircraft cabins); crash tests on "crash-proof" gasoline tanks; a fully-cowled, high-horsepower aircraft engine, nacelle mounted on a stub wing, running at full RPM have its gas line "break," burst into blow-torch conflagration and then be dramatically squelched; see "Rube Goldbergs" of electronic navigation facilities which are forerunners of the devices which in a year or two will guide the ship you're flying.

The CAA has also built under the Development of Landing Areas for National Defense (DLAND) and the Development of Civil Landing Areas (DCLA) programs a number of large airports in the U. S. They were designed and constructed under the aegis of Federal Airways engineers. A good example of this effort is the fine University of Illinois Airport south of Champaign-Urbana.

As a resume of CAA engineering work this is a very general picture of a complex group. Aviation is not a static business, but instead the need for continual improvement in speed and safety affords an interesting challenge to all facets of the engineering and physical sciences. I am convinced that the time is not far off when we'll say present-day accomplishments were interesting "stepping-stones."

COST OF LIVING INDEX

The cost of living correction factor to be applied to the I. S. P. E. Schedule of Minimum Fees and Salaries is based upon the Consumer Price Index of the 1947-49 average as determined by the Bureau of Labor Statistics. On the 1947-49 base the correction factor for May 1955 is 114.2.

Joliet Chapter Tours E. J. & E. Railway

by ROBERT A. BROWN, Secretary, Joliet Chapter

On May 21, the Joliet Chapter members assembled early in the morning at the East Joliet Yard of the Elgin, Joliet and Eastern Railway for a tour of the railway's right-of-way from Joliet to Kirk Yard in Gary, a distance of about 40 miles. The three-car "President's Special" diesel-engined train the railway provided for transportation was shined and polished to perfection. The train crew was positively the elite corps of the railroading industry; dressed in business suits with snowy white shirts, they looked like well-dressed bankers rather than a working train crew. A far cry from the smoke and cinders of the steam and coal of just a few short years ago, this crew in itself aptly demonstrated the progress of railroading on one of America's most progressive railroads. Without the flags and lanterns (which today are electrically operated) of their trade, the men, by their brisk, businesslike appearance, would have confused John Daly as well as the entire panel of "What's My Line?"

In the fifty-man group of professional engineers, the railroad had a super-critical inspection group. Representing the entire field of professional engineering, these men have sharp, experienced eyes, quick to detect flaws in the roadbed, the rolling stock, crossing grades, signals and other details of railroad operation. Yet, the group was loud in its praises of the excellent maintenance and the perfection of design seen everywhere on the E. J. & E.

High spirits dominated the engineers. Beginning with the appearance of numerous cameras, both movie and still, which prompted the question, "What's this, a meeting of the Camera Club?" the quips came forth quickly. Immediately south of the East Joliet Yard the train was halted for a ten-minute wait at the Rock Island crossing. Bill Gray immediately heard from the E. J. & E. professional engineers who have been the butt of Bill's complaints for years. Seems that Bill rides the Rock Island commuter train daily and has been loud in his complaints about delays caused by E. J. & E. trains. It appeared that this delay had been timed very carefully to demonstrate to Bill that there are two sides to every argument and that the Rock Island is every bit as big an annoyance to the "J" as the "J" is to the Rock Island at this crossing.

After the Rock Island crossing incident, the "Professional Engineers' Special" proceeded out of the East Joliet Yard past Michigan Beach, Rowell Avenue, the Orphan's Home and the Joliet Country Club into the countryside. As the "J" is strictly a freight line, travel in a passenger train over the right-of-way is a rare event not usually shared by others than "J" employees and those associated with the "J." A more beautiful day could not have been ordered. The countryside was green from abundant rains, farmers were busy in their fields,

and each little hamlet was bustling with activity as the "Special" passed through. Seemingly in no time at all, with the engineers visiting back and forth between compartments and cars, trips to the diner for hot coffee and cold cokes, the train passed through Chicago Heights. The "J" route passes through the industrial district, giving the engineers a view of the thriving Chicago Heights industrial district.

Crossing the state line into Indiana, many of the passengers were impressed by the change in the nature of the countryside, as the soil composition changes from the rich black loam of Illinois to the sand of northeastern Indiana, especially as Gary is approached.

Nearing Gary, perhaps the greatest congestion of railroad traffic in the country occurs where all of the railroads from the east and the southeast pass through a narrow bottleneck approaching Chicago. One of the "J"'s most important missions is to convey freight cars around this bottleneck rather than through it. Westbound and northbound traffic headed west of Chicago is picked up at Kirk Yard by the "J" and routed around the Chicago congestion at a great saving of facilities, time and money.

Arriving at Kirk Yard, the "Engineers' Special" halted on a siding near the automatic car retarding system and its passengers alighted. Divided into two groups, the engineers were shown through the new system which sets up a punched card system of car locating and routing. The railroad had thoughtfully handed each passenger a large manila envelope containing descriptive information about the Kirk Yard, its "Hump" and automatic car retarding system. Since they had had an opportunity to study the data during the hour's ride from Joliet to Gary, they were familiar with the general plan of operation and needed only to witness its actual operation. They were shown how the punched card system works and then watched while a train was pushed through the "Hump." After the demonstration, a buffet lunch was served on board the special train by D. L. M. Winfield, the railroad's Superintendent of Employment.

Railroad officials who accompanied the special train and arranged the occasion included Paul T. Moran, Operating Vice-President; Bob Hobson, Joliet Division Superintendent; Stuart H. Shepley, Chief Engineer; Bernard F. Tyrell, Road Foreman of Engineers; Louis A. Veronda, Trainmaster; and F. O. (Sam) Morse, Chief Train Dispatcher. The train crew included Conductor Ed Gardner, Engineer Howard Wilkins, Fireman Albert Zettergren, Brakeman L. F. Larson, and Cook J. Stubbs.

One of the worst tragedies that can befall a man is to have ulcers and still not be a success.

—*Ind. Med. Soc. Bulletin.*

Obituary

Oscar G. Hiveley (S'38), member of Rockford Chapter died of a heart attack on May 12th. Mr. Hiveley attended Freeport schools, and graduated with a B.S. in civil engineering from the University of Illinois in 1909.

He operated a consulting engineering and surveying business in Freeport from the time of his graduation from the U of I to his retirement in 1951. From 1914 to 1951 he was County Superintendent of Highways, and upon his retirement was succeeded by his son, George E. Hiveley. He was also employed by the Illinois Division of Highways from 1910 to 1912. Mr. Hiveley was 69 years old at his death.

Word has reached the office that Lucien C. Laswell passed away early in May. Mr. Laswell was a member of the Rockford Chapter and joined the Illinois Society in 1923, becoming a National member in 1937. He was owner of the Laswell Engineering Company. Early in his engineering career he was with the firm of Pearse, Greely, and Hansen on the dam at Decatur. Later he was with the Sanitary District of Decatur, and then with A. C. Stansfield on a water works job at Gillespie. Mr. Laswell would have been 56 in August.

Asking for Federal aid is like sending your wheat to the mill and only getting the bag back.

—Peter Kuntz Co. Mag.

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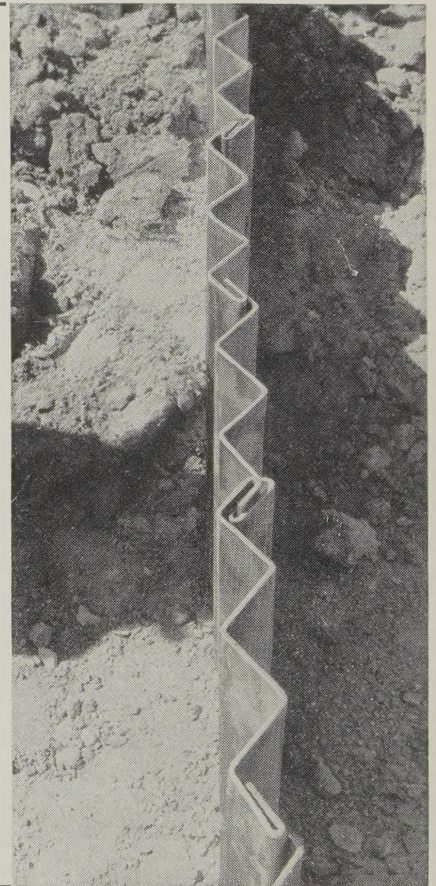
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Know The Members of Your Board of Direction

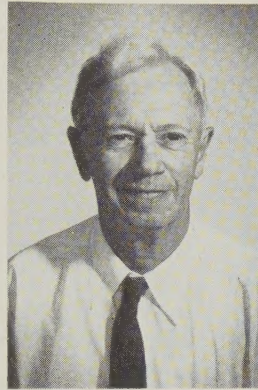
The governing body of the Illinois Society is the Board of Direction. The Illinois Society Constitution gives them their power; it reads, Article VII, Section 2, "The management of the Society shall be vested in a Board of Direction . . ." Article IX, Section 5, reads, "The Board of Direction shall be vested with the general conduct of the affairs of the Society and between Annual Meetings shall act on all matters concerning the Society. It shall approve the execution of all contracts and the expenditures of moneys except as provided in Article X. It shall have the sole power to grant and revoke charters of Chapters."

From the above you see that the Board of Direction of the Illinois Society is the group of men who make the decisions of policy and who say "yes" and "no" to any matter of Society business.

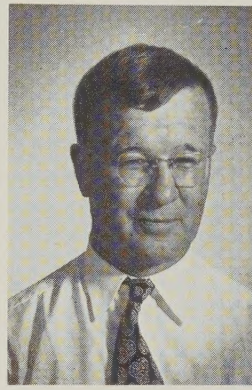
To help you know the members of the Board, pictures of the members and thumbnail sketches will be run in this column, space permitting. There is no order or reason for the way the individuals are presented. These two just happened to be the two top pictures.

(Photos by C. Dale Greffe furnished at no cost to the Society)

Frank L. Dunavan, Illinois Valley Chapter, became a member of the Board in 1950 at the close of the 65th Annual Meeting in Decatur. After earning his B.S. in Civil Engineering at the University of Illinois in 1916, he worked a year for the C.&A. Railroad. In 1920 he joined the Illinois Division of Highways and worked in and around Ottawa until he was retired from that position a couple of years ago. Frank could not stay retired, however, and has been doing consulting engineering work for a select clientele. He has a "Do-it-yourself" shop in the basement of his house so complete that it is the envy of many of his engineering friends. Frank was born on Bastille Day in 1890.



Frank L. Dunavan



Louis S. Pappmeier

Louis S. Pappmeier, West Central Chapter, came on the Board at the beginning of the 67th year of the Society in February, 1951. He lives in Galesburg, has a consulting engineering business, has a son, Harold, who is also a National Member of the West Central Chapter. Louie, as he is called, like to travel and has made two Mexican trips since becoming a member of the Board. He earned his B.S. in Civil Engineering at the University of Illinois in 1919,

and after post graduate work at I.I.T. was employed by the Division of Highways, State of Illinois, in the Peoria District. Louis was born in Litchfield just before the outbreak of the Spanish American War.

The true test of a University's success is not the discoveries and inventions which its professors make, or the books they write, but the sort of people its students turn out to be.

—Clarence Tracy, *Queen's Quarterly*, Canada.

Habits are to the soul what the veins and arteries are to the body.

—*Sunshine Mag.*

I hold every man a debtor to his profession; from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves by way of amends to be a help and ornament thereunto.

Sir Francis Bacon

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LETTERS TO THE EDITOR

Dear Mr. Roberts:

Your kind letter of May 23 at hand. Thanks for your appreciation and news about Professor Babbitt. I thought it would be well to inform you that I am retiring on June 30 (1955) from service with the City of Chicago. I have served for 50.25 years, the past 45 years in design and construction of city street pavements. (Thirty years with Board of Local Improvement and fifteen years with Bureau of Streets.) For the past eight years I have been Assistant (Chief) Engineer of Streets for Bureau of Streets—Department of Streets and Sanitation (City of Chicago). I have been a member of both the I.S.P.E. and W.S.E. since 1908 (47 years). My year in the presidency was not a happy one (during the depth of the 1932 depression). However, our experience laid the foundation for the change in the Society to an organization fighting for the rights, standing, and welfare of the engineering profession. I can still recall some of the wailing letters, "Why spend time and money for an education when you can't use it?" (No demand for engineers.) But NOW—Engineers are riding high.

Best wishes.

Very truly yours,
(Signed) HUGH J. FIXMER.

Time is capital which costs nothing to get but everything to lose.

—*Times of Brazil.*

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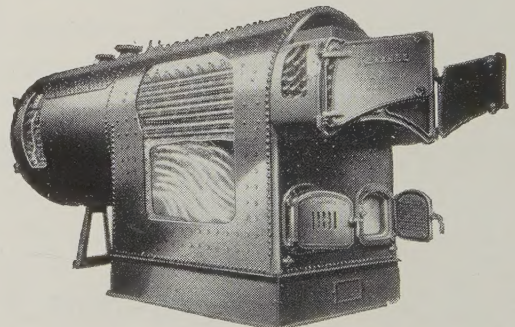
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CLASSIFIED TELEPHONE DIRECTORY LISTINGS

Considerable work has been done in the attempt to get the publishers of the classified telephone directory to give a heading "Registered Professional Engineers." However, the publishers of the book will not give such a listing, since if they did they would be required to list other registered personnel.

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There is a solution, however, which was described by Mr. DeMent at the last Board of Direction meeting. He says that the telephone book publishers will accept the description "Registered Professional Engineer" under "Engineers," under the name of the person listed, at a cost of \$1.00. Mr. DeMent pointed out that certified public accountants are listed in this manner, and since a great many of them took this listing in the Chicago classified telephone directory, it made an impressive list. This is the form which is acceptable:

DeMent, George L.

Registered Professional Engineer

406 City Hall.....Randolph 6-8000

When the question next arises in your case, you are urged to use this form. If enough members of the Society do this, it will undoubtedly have the desired effect.

Engineering Societies Personnel Service, Inc.

New York Chicago Detroit San Francisco
84 East Randolph Street, Chicago 1, Ill. STate 2-2748

These items are from information furnished by the Engineering Societies Personnel Service, Inc., Chicago. This SERVICE is operated on a co-operative non-profit basis by the Illinois Society of Professional Engineers, and the national societies of Civil, Electrical, Mechanical and Mining and Metallurgical Engineers. Apply to ESPS, Chicago and the key number indicated. Prepared ENGINEERS AVAILABLE advertisements limited to 40 words, with typed resumé attached may be submitted to ESPS Chicago by members of the Illinois Society of Professional Engineers at no charge. If placed in a position as a result of an Engineers Available or Position Available advertisement, applicants agree to pay the established placement fee. These rates are available on request and are sufficient to maintain an effective non-profit personnel service. A weekly bulletin of positions open is available to subscribers. Apply E. S. P. S., Chicago.

MEN AVAILABLE

Expediter. 35. 15 mos. expediter, coord. for mach. shop. Follow up on projects. Mach. shop suv. 15 mos. design and devel. new and improve methods, packaging and handling prod. \$5200. Midwest. 246-PE

Gen. Mgr. 49. C.E. 1 yr. project mgr. domestic housing constr. 3½ yrs. contract insp. on chem. plan constr. 21 yrs. consult. gen. constr. \$12,000. U.S. 247-PE

Naval Arch. 26. B.S.E. 31 mos. working for shipyards doing coordination, planning and liaison. \$4800. Midwest. 248-PE

Estimator. 31. M.E. 41 mos. material take-off, charge of non-destructive testing, time study and cost accounting of direct labor, on piping systems, plumbing, heating and underground piping. \$650. U.S. 249-PE

Sales Engr. 32. M.E. 7 yrs. design and development of aluminum job shop commodities. 1 yr. charge of residential and commercial hgt. layouts, and purchases of assoc. eqpt. \$7200. Midwest. 250-PE

Development. 33. M.E.Met. 4 yrs. design and layout of materials handling eqpt., tank turret, pumps, and tractor transmission. 1 yr. res. aircraft thermo stress problems. \$6000. Midwest. 251-PE

Development. 30. M.E. 4 yrs. organize and coord. quality control program, design functions with sales, engrg. & production depts. Reports, estimate design and development cost, controls and products in pneumatic control line. \$7200. Midwest. 252-PE

Sales. 46. 15 mos. designer, checker on special machine tools. 15 mos. esp. or engrg., tooling & production. 18 mos. Sales of heating, vent., eqpt. \$7500. U.S. 253-PE

Constr. 27. C.E. 3 yrs. architectural field appraiser on properties of various kinds. 6 weeks resp. for constr. of streets and sidewalks for municipality. \$5600. Chicago. 254 PE

Chem. Engr. 42. M.S.I.E. 5 yrs. admin. client contact market res. and analysis, new developments, technical editing and correspondence. 9 yrs. dev. engr. and tech. sales. of optical goods. 15 yrs. time and motion study, machine shop, sub and final assembly work on radios and TV's. \$10,000. Midwest. 255-PE.

Ch. Engr. 28. Marine engrg. 7 yrs. supv. of operation and maint. of turbo-electric and geared turbine power plants, boilers and attendant auxiliaries and electrical and lubrication eqpt. \$7000. Midwest. 256-PE

Constr. Supt. 37. 2 yrs. electrical estm. on power station and substation eqpt. and cable

estms. 2 yrs. layout and design of power and light. 1 yr. estimator-draftsman for constr. Co. 1 yr. layout of reinforced concrete bldgs. \$6000. Chicago. 263-PE

Petro Engr. 28. M.E. 3½ yrs. designing pumping stations, analyzing quotes on eqpt., hydraulic computations, teonomic studies. 1 yr. plant maint. 1 yr. on drafting board. \$5500. Midwest. 264-PE

Ch. Ind. Engr. 36. 1 yr. installation of methods and wage incentive program. 6 yrs. charge of wage incentives, plant layout, job evaluation, costs, time and methods study. Knowledge of plastics, electronics and sheet metal. \$6500. Chicago. 265-PE

Staff Engr. 34. M.E. 2 yrs. plant layout, layout of process eqpt. sewer lines and ventilating systems. 7 yrs. design of material handling and new ordnance eqpt. \$7000. Chicago. 266-PE

POSITIONS AVAILABLE

Sales Engrs. 2 with Mech. or Met., training and sales exp. in metal products fields to sell powder metallurgy products. Sal. \$4800 plus comm. and expenses. Loc.: Pref. resident of Milw. or vicinity to cover Wise. and Iowa and parts of adjacent states. OR resident of Indianapolis or Louisville and vicinity to cover Ind., Ky., Southern Ill., and parts of adjacent states. W-1637

Sales Trainee—Lubricants, recent grad., to 2 yrs. exp. definite interest and possible academic emphasis on lubrication; demonstrated aptitude and interest in sales. Field and office training about 2 yrs., including retail sales; Jr. sales 3 yrs. on small comml. accounts; final assignment to large industrials. Salary: Open. Bay Area. S-885

Jr. Salesman—Petroleum Products. 24-30, degree, sales aptitude and desire to learn lubrication engrg. sales to industrials. Willing to work either S.F. or L.A. Car furnished. \$365/mo. start. \$400 in yr. Perm. S-931

Chemical Engineer. Chem.Engr. Age: up to 40. 4 plus yrs. exp. in engrg. work with chemical processing plants. Knowledge of petro-chemical and electro-chemical helpful. Duties: engrg. work in general with chemical processing plant for a mfrg. of gases. Sal.: Up to \$8000 per yr. Location: Chicago. C-3004

Purchasing. Chem. Age: up to 32. 2 plus yrs. exp. in chemistry or chemical work. Duties: purchasing chemical raw materials. For a rubber mfrg. Sal. \$425 to \$450. Em-

ployer will negotiate fee. Loc.: South West Chicago Suburb. C-3008

Instructor. B.S. in Engrg. Age: to 30. No exp. necessary. Know: Engrg. drawing, mechanics. Duties: teach courses in drawing, engrg. problems (slide rule) for Freshmen and some applied mechanics. Sal.: \$3600-\$3900 for 9 mos. Loc.: Colorado. C-3021

Research Chemical Engr. Chem. Engr. Age: up to 36. Recent grads and better. Knowledge of pilot plant eqpt. and apparatus. Duties: applied industrial research in translating results of research to pilot plant and production, analysis of problems and applying mathematical principles and use of mechanics of chemical engineering to industrial process and product development. For a paper mfrg. Sal.: \$375 to \$700 per mo. Loc.: Wisconsin. C-3022

Associated Editor. B.S. Mech. Elect. or Chem. Age: 25-30. 2 plus yrs. exp. in industry. Knowledge of photography desirable. Duties: to train for work as associated editor for publication covering the plant management, maint. and power plant fields. To start will work on analyzing mail and spot news. Must be draft exempt. Sal.: \$5000 to \$6000. Employer will negotiate fee. Travel: 25%. Loc.: So. Michigan. C-3103

Mechanical Analyst. Chem.E. or M.E. Age: 30-40. 4 plus yrs. exp. in experimental test work in heat transfer or in heat engine work. Knowledge of thermodynamics. Duties: over-all thermodynamic analyses of proposed systems for economic consideration. The same for eqpt. design. Also stress and shock analyses of process equipment and pressure vessels. For a mfrg. of heating eqpt. Sal.: \$7380 to \$9960 per yr. Location: New York. C-3127

Ind. Engr. M.E. or Chem.E. Age: 30-35. 3 plus yrs. exp. in utility survey and cost work. Duties: study consumption and costs of coal, gas, acetylene, water, steam, heating, ventilating and other miscellaneous assignments and make recommendations to improve or reduce costs. For Mfrg. of valves. Sal.: \$6-7000. Loc.: Chicago. C-3212

Sales Engr. Eng. Degree. Age: 30-35. 2 plus yrs. exp. in sales or application of hgt. vent., air cond. or allied eqpt. Duties: technical selling of above named eqpt., calling on consulting engrs., architects, contractors, jobbers and industrials. For Mfr. of hgt. vent. and air cond. Sal.: \$6500 and comm. Loc.: Considerable Travel. Car Required. C-3229